

CLAIMS

1. Reel driver for rolling mills with an upper and a lower driving roll, characterized by the fact that the lower driving roll (1) has a steel roll shaft (2) on which a cast jacket (3) is mounted by adhesive bonding and/or shrink fitting.

2. Reel driver in accordance with the introductory clause of Claim 1, characterized by the fact that the upper driving roll (1') has a cast jacket (3') that is held between two clamping elements (5) arranged on a shaft (2').

3. Reel driver in accordance with Claim 1 and/or Claim 2, characterized by the fact that the cast jacket (3, 3') consists of ductile iron and has an outer working layer (4, 4') produced by the centrifugal casting process.

4. Reel driver in accordance with Claim 3, characterized by the fact that the ductile iron consists of 2.5-4.0 vol.% C, 1.0-4.0 vol.% Si, 0.2-2.0 vol.% Mn, < 0.10 vol.% P, < 0.05 vol.% S, < 1.0 vol.% Cr, < 5.0 vol.% Ni, < 3.0 vol.% Mo, < 1.0 vol.% Al, and < 5.0 vol.% Cu.

5. Reel driver in accordance with any of Claims 1 to 4, characterized by the fact that the working layer (4, 4') consists of indefinite chill cast iron.

6. Reel driver in accordance with Claim 5, characterized by the fact that the indefinite chill cast iron consists of 2.7-3.8 vol.% C, 0.5-2.0 vol.% Si, 0.3-1.5 vol.% Mn, < 0.15 vol.% P, < 0.10 vol.% S, 1.0-3.5 vol.% Cr, 1.0-5.0 vol.% Ni, 0.1-0.8 vol.% Mo, 0.010-0.5 vol.% Al, and 0.5-5.0 vol.% Cu.

7. Reel driver in accordance with Claim 3 or Claim 4, characterized by the fact that the working layer (4, 4') consists of indefinite chill cast iron with alloy carbides.

8. Reel driver in accordance with Claim 7, characterized by the fact that the indefinite chill cast iron with alloy carbides consists of 2.7-3.8 vol.% C, 0.5-2.0 vol.% Si, 0.3-1.5 vol.% Mn, < 0.15 vol.% P, < 0.10 vol.% S, 1.0-3.5 vol.% Cr, 1.0-5.0 vol.% Ni, 0.1-0.8 vol.% Mo, 0.010-0.5 vol.% Al, 0.5-5.0 vol.% Cu, 0.5-4.0 vol.% V, 0.5-5.0 vol.% Nb, and 0.5-5.0 vol.% Ta.

9. Reel driver in accordance with Claim 3 or Claim 4, characterized by the fact that the working layer (4, 4') consists of chromium alloy cast iron.

10. Reel driver in accordance with Claim 9, characterized by the fact that the chromium alloy cast iron consists of 0.8-3.5 vol.% C, 0.5-2.0 vol.% Si, 0.4-3.0 vol.% Mn, < 0.15 vol.% P, < 0.10 vol.% S, 8-35 vol.% Cr, 0.5-4.0 vol.% Ni, 0.1-5 vol.% Mo, 0.5-5.0 vol.% Cu, 0.5-4.0 vol.% V, 0.5-5.0 vol.% Nb, and 0.5-5.0 vol.% Ta.

11. Reel driver in accordance with Claim 3 or Claim 4, characterized by the fact that the working layer (4, 4') consists of high-speed steel (HSS).

12. Reel driver in accordance with Claim 11, characterized by the fact that the high-speed steel consists of 0.5-3.0 vol.% C, 0.5-2.0 vol.% Si, 0.4-3.0 vol.% Mn, < 0.15 vol.% P, < 0.10 vol.% S, 2-10 vol.% Cr, 0.5-4.0 vol.% Ni, 2-10 vol.% Mo, 0.5-5.0 vol.% Cu, 2-10 vol.% V, and 1-15 vol.% W.

13. Reel driver in accordance with one or more of Claims 1 to 7, characterized by the fact that the rolls are used as driving rolls, guide rolls, or wear-resistant rolls in hot and/or cold rolling mills.